



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of : Confirmation No. 7678  
Kazuyuki NITTA et al. : Docket No. 2001-1703A  
Serial No. 09/987,718 : Group Art Unit 1756  
Filed November 15, 2001 : Examiner K. Sagar

METHOD FOR FORMING A HOLE-  
PATTERNED PHOTORESIST LAYER

**37 C.F.R. 1.131 DECLARATION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Kazuyuki NITTA, Satoshi SHIMATANI and Kazufumi SATO declare:

1. That they are the joint inventors of the subject application;
2. That they are employees of Tokyo Ohka Kogyo Co., Ltd. of Tokyo, Japan, hereinafter TOK;
3. That they conceived the invention as presently claimed prior to the November 13, 2000 effective date of the Takemura reference (US 6,511,785), cited in the Official Action of March 21, 2003;
4. That this prior conception was coupled with diligence from the time just prior to the November 13, 2000 effective date of the Takemura reference until the November 20, 2000 filing date of Applicants' Japanese priority application 2000 353509;
5. That proof of such conception is set forth in the attached Budget Proposal prepared by Kazuyuki NITTA, the first named inventor herein, on behalf of himself and his co-inventors (Attachment A);

6. That this budget proposal Attachment A (in Japanese) is accompanied by a verified English translation thereof (Attachment B);
7. That attached to said Budget Proposal is an Outline of New Patent Application (Attachment C) which Outline was completed, forwarded to the Executive Board of TOK and approved by them on November 15, 2000;
8. That upon approval of the Budget Proposal and accompanying Outline of the New Patent Application, these materials were forwarded to Agata Patent Office of Tokyo, Japan prepare the Japanese priority application which was filed on November 20, 2000;
9. That the attached materials evidence conception from the point and time just prior to the November 13, 2000 effective date of Takemura to the November 20, 2000 filing date of Applicants' Japanese priority application and diligence over this period of time is shown by the reasonable amount of time taken to prepare and file the Japanese application;
10. That in view of the foregoing, it is evident that Applicants conceived the present invention prior to the November 13, 2000 effective date of the Takemura reference and acted with diligence from the period just prior to the effective date of this reference to the November 20, 2000 filing date of the Japanese priority application upon which the present application is based, which the priority application is a constructive reduction to practice;
11. That the foregoing also evidences an actual reduction to practice prior to the November 13, 2000 effective date of the Takemura reference since the outline of new patent application (Attachment C) sets forth actual experimental work by Applicants prior to the effective date of the reference;
12. That in this regard, it can be seen from Example 1 of the Outline of New Patent Application (Attachment C), that all elements of the invention as presently claimed were conceived and actually reduced to practice prior to the time that the Outline of New Patent Application and Budget Proposal were prepared i.e. prior to November 13, 2000 effective date of Takemura;
13. That the steps of present claim 1 are set forth on page 7 of the Outline of New Patent Application (Attachment C) and the composition fully in the scope of present claims i.e. claim 1 is set forth in Example 1 follows:

- a. Claim 1 recites four steps (1)-(4) which are disclosed in steps (I)-(V) on page 7 of the Outline of New Patent Application (Attachment C).
  - b. The composition recited in claim 1 (A)-(D) is set forth in the Outline of New Patent Application Example 1. In this regard:
  - c. The 75 parts of first polyhydroxystyrene resin and 25 parts of second polyhydroxystyrene resin meet (A) of claim 1.
  - d. The 5 parts of (cyclohexylsulfonyl) diazomethane meet (B) of claim 1.
  - e. The 5 parts of 1,4-cyclohexanedimethanol divinyl ether of Example 1 meet (C) of claim 1 and
  - f. The 0.2 parts of triethanolamine of Example 1 meet (D) of claim 1.
14. That all requirements of claim 1 of the present application are thus met by Example 1 of the Outline of New Patent Application.

That they further declare that all statements made herein of their own knowledge are true, and that all statements on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

August 4, 2003  
Date

Kazuyuki Nitta  
Kazuyuki NITTA

August 4, 2003  
Date

Satoshi Shimatani  
Satoshi SHIMATANI

August 4, 2003  
Date

Kazufumi Sato  
Kazufumi SATO

# 稟議書

決裁No 13 東応裁第 947 号

|                  |                      |             |        |       |              |                 |                  |        |        |
|------------------|----------------------|-------------|--------|-------|--------------|-----------------|------------------|--------|--------|
| 関<br>会<br>長      | 社<br>長               | 副<br>社<br>長 | 専<br>務 | 管理本部長 | 営業本部長        | 材<br>料<br>事業本部長 | プロセス機器<br>事業本部長  | 開発本部長  | 常務取締役  |
|                  |                      |             |        |       |              |                 |                  |        |        |
| 開発本部長            |                      |             |        |       | 知的財産<br>管理部長 | 決<br>裁          | 12.11.15 日       |        |        |
|                  |                      |             |        |       |              | 認<br>可          | 条<br>件<br>付<br>可 | 保<br>留 | 否<br>認 |
| 受付               | 12年11月10日            |             | 総務部長   |       | 受付           | 決裁者付記事項         |                  |        |        |
| 起<br>案<br>部<br>門 | 開発本部<br>先端材料開発1部     |             |        |       |              |                 |                  |        |        |
| 起<br>案<br>No     | 2000年11月1日<br>12-207 |             |        |       |              |                 |                  |        |        |

## 国内特許出願について

KrFポジレジストに関して、H.T.位相シフトマスクとサーマルシュリンクを目的とする材料において、有機アミンとジビニルエーテル(クロスリンカー)が有効であり、これらの材料を使用したレジストを権利化のため特許出願致したくお伺い申し上げます。

### 記

出願人：東京応化工業株式会社

発明者：新田 和行、嶋谷 聡、佐藤 和史

発明の名称：レジストホールパターンの形成法

費用概算：約35万円（出願時）約35～80万円（審査請求後）

予算番号

添付書類

発明概要書

1通

回議者付記事項

tok 東京応化工業株式会社

ATTACHMENT A